ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. 96-98

COMMENTS OF NORTHERN TELECOM

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SUMMARY

Northern Telecom Inc. ("Nortel") submits these comments on the Commission's proposals for additional interconnection and unbundling of the network because, as a manufacturer of telecommunications equipment, it may be directly or indirectly impacted by this proceeding. Nortel urges the Commission to adopt a process to select "technically feasible" points of unbundling and interconnection that includes an economic, in addition to strictly technical, component in that process. A failure to do so could result in the imposition of significant uneconomic costs on carriers, manufacturers, and ultimately consumers. Nortel also suggests that the Commission develop a dynamic process for determining these additional points of interconnection and unbundling, because the technical feasibility of particular points will evolve over time (rendering new points technically feasible, but also rendering some formerly technically feasible points obsolete).

Nortel envisions a process, similar to the procedures used for Open Network Architecture, whereby a competitive local exchange carrier could request a new functionality or point of interconnection. The incumbent local exchange carrier, the manufacturers, and/or standards development organizations (accredited or nonaccredited) would then have a limited amount of time to review the request to determine whether it was technically feasible. In this manner, before imposing any new

requirements, the carriers, the manufacturers and the Commission would be in a position to judge whether (i) there is a genuine need for the capability; (ii) the capability can be implemented efficiently and at reasonable cost; (iii) access to proprietary technology is involved; and (iv) a reasonable schedule for implementation can be set.

Nortel also believes the Commission should define "equal in quality" in such a manner that the differences across technologies are recognized. In addition, Nortel urges the Commission to adopt a national baseline of technically feasible points of unbundling and interconnection, because the market for telecommunications equipment is nationwide, and because carriers will deploy data bases and service control points servicing local exchange service networks in multiple states. Finally, the Commission must ensure that its interconnection or unbundling obligations do not inadvertently hinder the manifold universal service benefits that could be provided by a robust, enhanced telecommunications infrastructure.

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Northern Telecom Inc. ("Nortel") hereby comments on the Commission's Notice of Proposed Rulemaking addressing the new obligations imposed on local exchange carriers by the Telecommunications Act of 1996.[1/] In the Interconnection NPRM, the Commission seeks to develop rules and standards to implement Congress' intent, in adopting the Telecommunications Act of 1996, of enhancing local services competition. Nortel supports this goal, because it believes that marketplace forces, and not regulation, should control the telecommunications industry. As demonstrated herein, however, the Commission must be mindful of the technical issues involved in "opening" the local exchange carriers' networks through further unbundling and creating additional points of interconnection.

1/ Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, FCC 96-182, released April 19, 1996 (hereafter cited as "Interconnection NPRM").

I. Introduction and Background

Nortel is the leading global supplier, in more than 100 countries, of digital telecommunications systems to businesses, universities, local, state and federal governments, the telecommunications industry, and other institutions. The company employs more than 23,000 people in the United States in manufacturing plants, research and development centers, and in marketing, sales and service offices across the country. Nortel is keenly interested in this proceeding because of its potential for profound impacts on the telecommunications networks of the incumbent local exchange carriers, interexchange carriers and the new competitive local services carriers, which in turn will affect the business of telecommunications equipment manufacturers such as Nortel.

Nortel approaches this process of further opening the local exchange carriers' networks with an outlook influenced by its extensive experiences dealing with similar or analogous technical and policy issues. For example, to some extent this current process to enhance competition parallels the implementation of equal access that occurred as a result of the divestiture of the Bell Operating Companies. That action required significant efforts and the full cooperation of all of the companies involved, including the establishment of industry committees and forums to address the myriad technical issues created by equal access implementation. Nortel likewise expects

that this next phase of further opening up the local exchange carriers' networks will be equally complex, if not more so. Nevertheless, based on the successful deployment of equal access, Nortel believes that the industry is up to this important task.

II. Defining "Technically Feasible"

In establishing the obligations of the incumbent local exchange carriers, Congress imposes the duty of permitting interconnection "at any technically feasible point within the carrier's network."[2/] Congress additionally requires that the incumbent local exchange carriers provide access to unbundled network elements "at any technically feasible point."[3/] Thus, the concept of technical feasibility is critical to defining the obligations of the incumbent local exchange carriers. Nortel believes that the concept of "technical feasibility" should include an economic, in addition to strictly technical, component as part of the analysis. A failure to do so could result in the imposition of significant uneconomic costs on carriers, manufacturers, and ultimately consumers.

Nortel urges the Commission to be mindful of the need for an economic analysis in defining "technical feasibility" when establishing the unbundling and interconnection obligations of

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2/ 47 U.S.C. § 251(c)(2)(B).

3/ 47 U.S.C. § 251(c)(3).

the incumbent local exchange carriers.[4/] The Commission should avoid imposing unnecessary or excessive costs on the local exchange carriers (both incumbent and competitive), which in turn could fall indirectly on the telecommunications equipment manufacturers, and ultimately on consumers. Particularly given the expectation of the development of a fully competitive marketplace, there is no assurance that the carriers or manufacturers will be able to recover any uneconomic costs, and Nortel fears that such costs could be imposed if the Commission does not adopt a process whereby the economic impact of the new unbundling or interconnection requirement is assessed.[5/]

Nortel believes that Congress acknowledged this valid financial concern when it limited the unbundling and interconnection to technically "feasible" points (rather than technically "possible" points).[6/] The Commission should therefore avoid imposing unbundling or interconnection

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4/ Nortel is also concerned about the disclosure of its proprietary information in connection with the additional unbundling and interconnection obligations, a factor Congress also intended the Commission to consider. 47 U.S.C. § 251(d)(2). Nortel is separately filing its comments on the disclosure issues pursuant to paragraph 290 of the Interconnection NPRM.

5/ By way of contrast, under the MFJ, AT&T stood as a guarantor that the BOCs would be fully compensated for their costs of implementing equal access.

6/ For example, 2 gigabit hard disks for personal computers as a strictly technical matter were possible five years ago, but they were not practical or economical. Over time, such a capability became feasible, considering both technical and economic factors.

obligations that would uneconomically require carriers and manufacturers to expend significant resources developing new capabilities and deploying those capabilities throughout the incumbent local exchange carriers' networks. Nortel thus agrees with the Interconnection NPRM suggestion that, as a working principle, there should be a (rebuttable) presumption that an interconnection or unbundling point is technically feasible if that carrier is offering (or has offered), or another carrier using similar technology is offering, interconnection or unbundling at that point.[7/] Such a demonstration is evidence of the existence of the ability to provide the interconnection or unbundling using current technology.[8/]

On the other hand, Nortel does not believe that a presumption of technical feasibility based on its use elsewhere

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7/ This presumption also necessarily assumes that the carrier is using similar equipment throughout its network, since the technical feasibility will depend on the particular technology deployed in the network. For example, what may be a technically feasible point for unbundling a network element for an advanced digital switch may not be technically feasible for an analog switch. Nortel also assumes that when the Commission refers to another carrier offering the unbundling or interconnection at a particular point, that carrier is doing so as a regular offering, and not simply on an experimental or trial basis.

8/ The Commission should avoid a model that fails to also recognize that some points that may have been technically feasible at one point in time may become obsolete and uneconomical as the telecommunications network evolves. Thus, the fact that a point historically was technically feasible should not preclude a carrier from demonstrating that a new point (or points) should be substituted. Therefore, the Commission should adopt a process that allows a carrier to "withdraw" a point of interconnection over time (with a sufficient notice period to allow a transition to a substitute point).

should be irrebuttable. The carrier may be able to demonstrate that the requested capability is not present in the technology actually deployed in a particular requested area, and that it would not be economical or possible to upgrade or modify its network.

Nortel believes the Commission should avoid imposing interconnection obligations that would require a carrier (or a manufacturer) to expend significant resources developing or deploying requested capabilities where there will be inadequate demand to justify the expenditures. There are significant costs involved in developing new interconnection or unbundling points, including research and development of the capability, development and documentation of the interface standards, testing and deployment. To the extent that a manufacturer is forced to expend its resources on a project to develop such an uneconomic new point of unbundling or interconnection, it will have less resources available for other research and development activities, thereby potentially threatening the level of continuing innovation in the telecommunications marketplace. Thus, any such unnecessary or misspent resources will adversely impact the public interest. Nortel believes that these concerns argue strongly in favor of explicitly incorporating an economic component into the "technical feasibility" limitation created by Congress in enacting Section 251.

Nortel also urges the Commission not to adopt a model whereby regulation drives the marketplace decisions of the competing local exchange carriers. Regulations must be technology neutral, and should recognize the different capabilities (and costs) of different technologies (including wireline versus wireless). Nortel believes that such technology neutral regulations will allow the market to dictate how a competitive local exchange carrier will use a mix of new technologies, mature technologies, or unbundled incumbent local exchange carrier services/facilities in creating its own telecommunications network.[9/] The Commission should avoid regulatory decisions that would uneconomically discourage the competitive carriers from investing in any of these alternatives.

Nortel agrees with the Interconnection NPRM assessment that "technical feasibility" is a dynamic concept.[10/] Technical feasibility will vary by technology and will change over time as the carriers' networks evolve and mature. As the network evolves, new points of unbundling or interconnection may become technically feasible, and conversely some of the points that are in use may become technically obsolete. Indeed, Nortel believes

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9/ For example, decisions as to whether a competitive local exchange carrier uses fixed wireless local loop instead of unbundled loop using digital remotes or subscriber line concentrators should be based on accurate pricing signals. Those decisions could be distorted if the unbundled loops were not priced in a manner that accurately reflected their costs.

10/ Interconnection NPRM at ¶'s 58 and 87.

that the marketplace will serve to force such changes. The Commission must adopt a dynamic set of requirements both to implement newly feasible points, and to allow the migration away from obsolete points.

Nortel urges the Commission to adopt a process that will support such evolution over time, while also minimizing the risk that carriers or manufacturers will have to expend funds unnecessarily or prematurely. Nortel envisions a process, similar to the procedures used for Open Network Architecture, whereby a competitive local exchange carrier could request a new functionality or point of interconnection. The incumbent local exchange carrier, the manufacturers, and/or standards development organizations (accredited or nonaccredited) would then have a limited amount of time to review the request to determine whether it was technically feasible (and possibly even to estimate the costs of developing and deploying the capability).[11/] In this manner, before imposing any new requirements, the carriers, the manufacturers and the Commission would be in a position to judge whether (i) there is a genuine need for the capability; (ii) the capability can be implemented efficiently and at reasonable cost; (iii) access to proprietary technology is involved; and (iv) a reasonable schedule for implementation can be set.

11/ The Commission should also have a mechanism available for sanctioning any attempted abuses of this process.

III. Defining "Equal in Quality"

Congress also directed that the interconnection provided by the incumbent local exchange carriers be "equal in quality to that provided by the local exchange carrier to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection."[12/] Nortel urges the Commission to apply this provision reasonably, and not strictly. There are clearly going to be differences in interconnection that will vary because of the technology.[13/] The Commission should define "equal in quality" in such a manner that the differences across technologies are recognized.

IV. National Baseline

Nortel believes that there should be a national baseline identifying the technically feasible points of interconnection and unbundling.[14/] The market for

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12/ 47 U.S.C. § 251(c)(2)(C).

13/ For example, interconnection provided for a subscriber being served by a Fixed Wireless Local Loop service (depending on the wireless technology) will differ in several respects from interconnection provided for a customer served by a wireline twisted copper pair. A literal reading of the provision could require that the incumbent carrier would have to degrade some aspects of its services so as not to be providing disparate interconnection quality for these different technologies.

14/ Nortel believes that the requisite standards to accompany the interconnection or unbundling can (and will) be developed by the telecommunications industry through existing accredited and nonaccredited standards setting bodies.

telecommunications equipment is a national market. The cost of developing equipment would increase greatly if manufacturers were required to customize equipment to comply with a patchwork of inconsistent state requirements.

Nortel recognizes that some variation across state boundaries may be necessary, reflecting the different technologies and degrees of competitiveness that will exist in the telecommunications environment in different states.[15/] The Commission could allow the States to account for such technology-based differences. However, the Commission should be prepared to preempt any State regulation of interconnection and unbundling that creates requirements that deviate significantly from a national baseline.

The need for national unbundling and interconnection requirements is also necessary because for some carriers, their "local" networks may span several states. Many of the local exchange carriers (both incumbent and competitive) are now deploying networks with centralized data bases and service control points that serve local exchange networks located in different states.[16/] It is not clear how unbundling or interconnection would work if those centralized data bases and

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15/ For example, rural states can expect to differ significantly from urbanized states in the number and sophistication of competing local exchange carriers.

16/ Cf. Interconnection NPRM at ¶ 111.

control points serving networks in multiple states were subject to inconsistent state requirements.

Finally, by establishing national baselines, manufacturers will be able to roll-out new functionalities in an orderly manner consistent with one set of priorities. Manufacturers potentially face significant hurdles in adapting telecommunications equipment to operate under a new competitive paradigm. Manufacturers also have finite resources, and so will have to address the highest priority changes first. If different states established different priorities, then the manufacturers would be unlikely to satisfy every State's preferences, because they cannot develop all of the possible capabilities at once.

V. Impact on Universal Service and New Technology

In adopting the Telecommunications Act of 1996, Congress established multiple goals in addition to the enhancement of local services competition embodied in Section 251. As the Interconnection NPRM recognizes, two of these other public policy concerns are universal service and the encouragement of advanced telecommunications capabilities.[17/] Nortel shares these concerns, because an excessively balkanized telecommunications infrastructure will neither advance universal service nor support telecommunications technology advances.

17/ E.g., Interconnection NPRM at ¶'s 176 and 263.

In the Commission's Universal Service proceeding,[18/] Nortel offered its views on how advanced telecommunications technology can help make universal service goals possible.[19/] A robust telecommunications infrastructure, including Signalling System 7 and Touch Tone dialing, will allow all Americans to access many enhanced and automated services. Telecommunications can also enhance health care and education, through the sharing of resources over large areas. School children can have ready access to the Internet through deployment of LANs at schools, and videoconferencing capabilities make it possible for doctors to engage in remote diagnoses or students to enjoy the benefits of distance learning. The Commission must ensure that its interconnection or unbundling obligations do not inadvertently hinder these manifold benefits.

In sum, Nortel urges the Commission to be careful in structuring its requirements for the addition of new points of interconnection and further unbundling of the telecommunications networks of the incumbent local exchange carriers. The Commission must define "technically feasible" in a manner that does not impose uneconomic costs on the carriers, manufacturers and ultimately customers, and that takes account of the evolution of the networks over time. The Commission should also avoid

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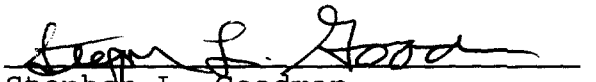
18/ Federal-State Joint Board on Universal Service, CC Docket No. 96-45, FCC 96-93, released March 8, 1996.

19/ See generally Reply Comments of Northern Telecom, submitted May 7, 1996.

distorting the marketplace or discouraging the deployment of beneficial new technologies. Nortel also urges the Commission to adopt a national baseline, in light of the nationwide nature of the market for telecommunications equipment. Nortel believes that taken together, these steps will well serve the public interest.

Respectfully Submitted,



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